

## **REMARKS**

### **I. Claim Rejections Under 35 U.S.C. §103(a)**

#### ***Requirements for Prima Facie Obviousness***

The obligation of the examiner to go forward and produce reasoning and evidence in support of obviousness is clearly defined at M.P.E.P. §2142:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

M.P.E.P. §2143 sets out the three basic criteria that a patent examiner must satisfy to establish a *prima facie* case of obviousness:

1. some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. a reasonable expectation of success; and
3. the teaching or suggestion of all the claim limitations by the prior art reference (or references when combined).

It follows that in the absence of such a *prima facie* showing of obviousness by the examiner (assuming there are no objections or other grounds for rejection), an applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443 (Fed. Cir. 1992). Thus, in order to support an obviousness rejection, the Examiner is obliged to produce evidence compelling a conclusion that each of the three aforementioned basic criteria has been met.

***Roeser in view of Brown***

The Examiner rejected claims 1-2, 5-8, 17-18 and 20 under 35 U.S.C. §103(a) as being unpatentable over Brown (U.S. Patent No. 4,110,585) in view of Roeser (U.S. Patent No. 3,828,148).

The Examiner argued that Brown teaches a toggle switch comprising a toggle mechanism (citing Fig. 1 of Brown); an actuator 8 within a tubular housing 4; and a lead wire terminal assembly comprising a plurality of pin contacts 12, 14, and 16, which exit through a cover. The Examiner argued that Brown teaches the claimed invention, but admitted that Brown does not teach a plurality of switches located within the housing.

The Examiner argued that Roeser teaches a toggle switch having a plurality of switches within the housing (citing contacts 19 and 19 in Fig. 1 of Roeser). The Examiner therefore argued that it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the switch device of Brown with a plurality of switches of Roeser to provide the switch device of brown multiple switching capabilities.

The Applicant respectfully disagrees with this assessment. The Applicant notes that neither Brown nor Roeser utilize a metal enclosure for hermetically sealing a switching area in order to prevent contamination and potential explosions, particularly during high gravity conditions (e.g., jet airplane). Applicant's amended claim1 is generally directed toward a toggle mechanism associated with a plurality of basic switches maintained within a switching area within a tubular housing; an actuator associated with at least one spring which actuates said plurality of basic switches, wherein said actuator and said at least one spring are located within said tubular housing; and a lead wire termination assembly configured within said tubular housing, wherein said lead wire termination assembly comprises a plurality of lead wires attached to a plurality of pin contacts that exit through a cover of said

tubular housing, thereby permitting said toggle switch apparatus to be actuated manually in a maintained position during high gravity conditions while providing a hermetic seal via said tubular housing for said switching area and said plurality of basic switches to prevent contamination and potential explosions.

Both Brown and Roeser discuss a metal housing for EMI shielding, but no mention is made of a hermetic seal provided by a metal enclosure (e.g., a tubular housing) and/or a switch assembly utilized in high gravity conditions. Applicant's invention was designed with high gravity conditions in mind, while neither Brown nor Roeser teach, disclose or suggest a switch for high gravity conditions. It is not clear that the devices of Brown or Roeser would function adequately in high gravity conditions. It is also not clear that a reasonable expectation of success would accrue from a combination of Brown and Roeser to teach a device that functions in high gravity conditions and also provides hermetical sealing for the switching area to prevent contamination/explosions.

Applicant's invention uses the metal enclosure for hermetically sealing the switching area to prevent contamination and potential explosions. The basic switches used Applicant's invention are hermetically sealed due the welded top cover 106 to the tube 103 that has a molded seal between the lever 102 and top cover 106. The glass to metal seal also provides the hermetic seal due to the glass to metal seal between the metal tube 110 and the board 155. The basic switches also use the glass to metal seal to help make the hermetic seal chamber on the individual pins.

Part 149 is used to evacuate the internal air and is filled with an inert gas and pinched off and sealed. Once the wires are attached to the three individual pins on the basic switches, the internal cavity around the wires is filled with epoxy. The Roeser patent, on the other hand calls out an O-ring for the hermetically seal. Such an o-ring cannot maintain a hermetic seal in high gravity conditions and would likely result in failure to Roeser's device during a high gravity operation. Applicant's

instead utilize an over mold of a rubber seal between the lever and cover, which are two metal parts. Based on the foregoing, Applicant believes that neither Roeser nor Brown, individually or in combination, teach all of the limitations of Applicants' invention, such as, for example, devices which can withstand high gravity operations and which also provide a particular type of improved hermetic seal. Thus, it would be improper to combine Roeser with Brown because neither reference provides the necessary teaching of key limitations of Applicant's claims.

The Applicant respectfully contends that the rejection to claim 1 fails to satisfy first prong of the aforementioned obvious test because, in view of the objectives and teachings of the Brown and Roeser references, there is no motivation or suggestion to combine them. In this regard, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the Brown and Roeser prior art references, not in the Applicant's disclosure.

The Applicant also separately contends that the rejection to claim 1 fails to satisfy second prong of the aforementioned obvious test because, in view of the objectives and teachings of the references, it is believed that a reasonable expectation of success for combining Brown and Roeser to teach all of the limitations of Applicant's invention would not result, particularly because it is likely that both the Brown and Roeser devices, including any seals thereof, would likely fail under high gravity conditions, thereby resulting in contamination to the such devices along with a high probability of an explosion (i.e., when the Brown and/or Roeser switch fails).

The Applicant respectfully asserts that the rejection to claim 1 herein fails under the third prong of the aforementioned obviousness test because, Roeser and/or Brown, alone or in combination with one another, do not teach or suggest all of the limitations set out in the amended claim 1. In particular, Roeser and/or Brown do not teach or suggest a hermetically sealed device designed for use in high

gravity conditions and wherein such a hermetic seal can withstand such high gravity conditions. The devices of Roeser and/or Brown are likely to fail during high gravity conditions. In fact, Roeser clearly teaches away from a device that can withstand high gravity conditions, due to the fact that O-ring of Roeser is not "tough enough" to withstand such conditions (i.e., such an O-ring device would likely fail during high gravity conditions).

Regarding claim 2, the Examiner argued that Brown teaches a metal housing 4 (citing col. 2, line 34 of Brown). The Applicant respectfully disagrees with this assessment. The Applicant asserts that Brown does not teach a metal housing that provides for hermetic seal and which can withstand high gravity conditions such as that of a high performance aircraft.

Regarding claim 5, the Examiner argued that the cover 10 of Brown is metal (citing col. 2, lines 55, arguing welded to housing). The Applicant respectfully disagrees with this assessment. The Applicant asserts that Brown does not teach a metal housing that provides for hermetic seal and which can withstand high gravity conditions such as that of a high performance aircraft.

Regarding claims 7-8, the Examiner argued that a multiplicity of essential working parts of a device involves only routine skill in the art. The Applicant respectfully disagrees with this assessment and asserts that the multiplicity of working parts is designed with a particular reason in mind, i.e., to withstand high gravity conditions, and that the design of such is not merely a routine skill in the art.

Regarding claim 20, the Examiner argued that the intended use of the switch device does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural invention. The Applicant respectfully disagrees with this assessment. The intended use of the switch device in fact does differentiate the claimed apparatus from the prior art references because the strong hermetic seal and structure of Applicant's invention were conceived to withstand

high gravity conditions and prevent failure and contamination during such conditions. A high performance aircraft as indicated in claim 20 is a system that is continually forced to operate under high gravity conditions. Because high gravity conditions and devices which can withstand such conditions are not taught by Brown and/or Roeser, it is believed that the intended use of Applicant's switch apparatus is differentiated from the device Brown and/Roeser.

Based on the foregoing, the Applicants believe that the rejection to claim 1 under 35 U.S.C. §103(a) has been traversed. As such, the rejection to claims 2, 5-8, 17-18 and 20 is also traversed because the arguments presented above with respect to the rejection to claim 1 apply equally to the rejection to claims 2, 5-8, 17-18 and 20. The Applicants therefore respectfully request that the aforementioned rejection to claims 1-2, 5-8, 17-18 and 20 be withdrawn.

***Brown in view of Roeser in view of Senor***

The Examiner rejected claims 3-4 9-16 and 19 under 35 U.S.C. §103(a) as being unpatentable over Brown in view of Roeser as applied to claim 1 above, and further in view of Senor (U.S. Patent No. 4,376,926). The Examiner argued that Brown and Roeser teach the claimed invention except for a glass-to-metal seal sealing the header into the housing. The Examiner asserted that Senor teaches a switch device having tubular metal-housing 12 (citing Fig. 12 of Senor) with a header 16 sealed by glass to metal (citing 16.1 to 16.3 to provide a hermetically sealed housing).

The Examiner therefore argued that it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the switch device of Brown and Roeser with the glass to metal seal of Senor, asserting that the seal of Senor would provide the device of Brown and Roeser with a hermetically sealed housing. Regarding claims 9-16, the Examiner argued that the method steps are

deemed obvious in view of the functions of the structure in the combination discussed above.

The Applicant respectfully disagrees with this assessment and submits that the arguments presented above with respect to the rejection to claims 1-2, 5-8, 17-18 and 20 under 35 U.S.C. §103(a) as being unpatentable over Brown in view of Roeser apply equally to the rejection to claims 3-4 9-16 and 19 under 35 U.S.C. §103(a) as being unpatentable over Brown in view of Roeser as applied to claim 1 above, and further in view of Senor. As indicated earlier, Applicant submits that it is improper to combine Brown with Roeser because a combination as such does not satisfy all three prongs of the aforementioned *prima facie* obviousness.

Thus, it would also be proper to combine Brown and Roeser with Senor as suggested by the Examiner for the same reasons. For example, Applicant notes Brown and Roeser teach away from a device that operates efficiently under high gravity conditions. Thus, it would be improper to combine senor with references that teach away from devices that can withstand high gravity conditions. Based on the foregoing, Applicant submits that the rejection to claims 3-4 9-16 and 19 under 35 U.S.C. §103(a) has been traversed. Applicant therefore respectfully requests withdrawal of the aforementioned rejection to claims 3-4 9-16 and 19 under 35 U.S.C. §103(a).

## **II. Conclusion**

In view of the foregoing discussion, the Applicant has responded to each and every rejection of the Official Action. The Applicant has clarified the structural distinctions of the present invention by amendments herein. The foregoing discussion and amendments do not present new issues for consideration and no new search is necessitated. Such amendments are supported by the specification and do not constitute new matter. Accordingly, Applicant respectfully requests

reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b), and further examination of the present application.

Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the undersigned representative to conduct an interview in an effort to expedite prosecution in connection with the present application.

Respectfully submitted,



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